

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1-3. (cancelled)

4. (previously presented) The surgical clip according to Claim 24, wherein the reaction surface is substantially fixed in relation to the movement of the limbs.

5-10. (cancelled)

11. (currently amended) The surgical clip according to Claim ~~23~~24, wherein the ~~reaction~~third contact surface is shaped in a manner generally complementary to the shape of those parts of each ~~limb~~first and second resilient arm which cooperate with the ~~reaction~~third contact surface in the closed condition of the clip.

12. (currently amended) The surgical clip according to Claim ~~23~~24, wherein at least one of the ~~first or second sections of the reaction~~third contact surface and the first and second resilient arms ~~are~~have surface projections which enhance the grip of the clip on the body passageway when engaged.

13. (currently amended) The surgical clip according to Claim 12, wherein the surface projections are of a type selected from the group consisting of rounded teeth, pointed teeth, nipping heads, ~~or~~and any combination thereof.

14. (previously presented) The surgical clip according to Claim 24, wherein each limb is connected to the base portion of the clip via a curved portion of the limb defining a connection point to the base portion behind the reaction portion of the clip.

15. (previously presented) The surgical clip according to Claim 14, wherein a further curve is provided in the limb in the opposite direction to the said curved portion, whereby the free end of the limb is disposed forward of the base portion of the clip.

16. (currently amended) The surgical clip according to Claim 14, wherein the proximal portion of each of the first and second resilient arms includes an elongate elongated curved section ~~portion is provided in each limb between the curves, whereby during closure a leverage effect is produced on the part of the limb which is in contact with~~ adapted to produce a leveraging effect when the first and second resilient arms are moved during closure to engage the body passageway.

17. (previously presented) The surgical clip according to Claim 24, wherein the base portion of the clip is in the form of an open loop or generally U-shaped member having a closed end directed away from the limbs and an open end at which the limbs and the reaction portion are connected to the base portion.

18. (currently amended) The surgical clip according to Claim 17, wherein the reaction portion of the clip ~~is provided in two halves~~ includes a first and second section, each half is section being connected to one side of the open end of the base portion via ~~the~~ a neck region, and which are the first and second sections being complementarily juxtaposed to and which together define the ~~reaction~~ third contact surface of the clip.

19. (currently amended) The surgical clip according to Claim ~~23~~ 24, wherein the base portion of the clip ~~is provided with~~ further comprises a weak-separable region or point at which the base portion may be ~~cut-separated~~ removed to remove the clip from the body passageway.

20. (currently amended) The surgical clip according to Claim 24, wherein the clip is ~~integrally formed~~ made of a superelastic or pseudoelastic shape-memory material.

21. (currently amended) The surgical clip according to Claim 24, wherein the clip is ~~integrally formed~~made of sheet nitinol metal (nickel-titanium alloy).
22. (previously presented) The surgical clip according to Claim 15, wherein an elongate portion is provided in each limb between the curves, whereby during closure a leverage effect is produced on the part of the limb which is in contact with the body passageway.
23. (cancelled)
24. (currently amended) A surgical clip for occluding a compressible tube-like body passageway having a longitudinal axis, the surgical clip comprising:
- a) a generally planar base portion having
 - i) a first face in a first face plane,
 - ii) a second face in a second face plane, ~~said~~the first and second face planes being parallel to each other, ~~said~~the first face facing in a first facing direction orthogonal to ~~said~~the first face plane and ~~said~~the second face facing in a second facing direction orthogonal to ~~said~~the second face plane and opposed to ~~said~~the first facing direction,
 - iii) a first axis lying in ~~said~~the first face plane defining a midline of ~~said~~the first face plane, and
 - iv) a second axis lying in ~~said~~the second face plane defining a midline of ~~said~~the second face plane, ~~said~~the first and second axes being parallel to each other and both lying in a central plane transecting the base portion orthogonal to ~~said~~the first and second face planes, ~~said~~the central plane defining a boundary between opposite first and second lateral regions of the clip, a direction along ~~said~~the parallel first and second axes constituting a forward direction of approach of the clip in ~~its~~an open condition towards ~~said~~the body passageway for engaging ~~said~~the body passageway prior to occlusion thereof;
 - b) a first resilient arm having
 - i) a proximal portion which is connected to ~~said~~the base portion and extends therefrom in ~~said~~the first lateral region of the clip,

ii) a distal end portion defining an elongate first contact surface for contacting ~~said~~the body passageway at a first location on ~~said~~the longitudinal axis of ~~said~~the body passageway in a closed condition of the clip, and

iii) a portion intermediate ~~said~~the proximal and distal end portions, which in the open condition of the clip is configured to cause ~~said~~the distal end portion of ~~said~~the first resilient arm to project in generally ~~said~~the forward direction of approach and angled in ~~said~~the first facing direction away from ~~said~~the first face plane;

c) a second resilient arm having

i) a proximal portion connected to ~~said~~the base portion and extending therefrom in ~~said~~the second lateral region of the clip,

ii) a curved distal end portion defining an elongate second contact surface for contacting ~~said~~the body passageway at a second location, distinct from the first location, on ~~said~~the longitudinal axis of ~~said~~the body passageway in the closed condition of the clip, and

iii) a portion intermediate ~~said~~the proximal and distal end portions, which in the open condition of the clip is configured to cause ~~said~~the distal end portion of ~~said~~the second resilient arm to project in generally ~~said~~the forward direction of approach and angled in ~~said~~the second facing direction away from ~~said~~the second face plane,

a portion of said~~the~~ base portion and ~~said~~the first and second resilient arms being adapted to ~~bound~~define, in the open condition of the clip, a gap in which the body passageway can be received with its longitudinal axis lying in the central plane parallel to the first and second directions when the clip engages the body passageway in ~~said~~the forward direction of approach; and

d) a reaction portion having

i) a neck region which extends from the base portion in a direction which is the same as ~~said~~the forward direction of approach and connects the reaction portion to the base portion so that the reaction portion is located forward of the base portion in ~~said~~the direction, and

ii) an elongate third contact surface facing in ~~said~~the forward direction for contacting ~~said~~the body passageway at a third location on ~~said~~the longitudinal axis of

~~said~~the body passageway, ~~said~~the third location being distinct from and between ~~said~~the first and second locations~~;~~₁

wherein ~~said~~the first and second arms ~~being~~are adapted to move, under a resilient restoring force, from an open condition to a closed condition of the clip in which ~~said~~the third contact surface bears against the body passageway in generally the direction of approach and ~~said~~the first and second contact surfaces bear against the body passageway in generally the opposite direction to the direction of approach, ~~said~~the distal end portion of ~~said~~the first resilient arm being angled in ~~said~~the first direction away from ~~said~~the first face plane and ~~said~~the distal end portion of ~~said~~the second resilient arm being angled in ~~said~~the second direction away from ~~said~~the second face plane;

whereby the body passageway can be gripped by the first, second and third contact surfaces of the clip at three distinct locations on ~~said~~the longitudinal axis of ~~said~~the body passageway, ~~said~~the third location being distinct from and between ~~said~~the first and second locations.

25. (new) The surgical clip according to Claim 24, wherein the third contact surface and the first and second resilient arms are suitably dimensioned and arranged so that in the closed condition of the clip substantially the entire transverse width of the occluded body passageway is in contact with the third contact surface.

26. (new) The clip of Claim 24, wherein said plane of said base portion is angled with respect to said plane of said third contact surface.